

Listing of Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

1.-36. (Cancelled)

37. (Previously Presented) A computer system comprising:

a console comprising a first coupling site, a second coupling site, and a power supply, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site;

a plurality of computer modules, each coupled to the connector and comprising,

a processing unit configured to operate at a frequency of 400 MHz or

higher for high speed serial communication with the other modules,

a main memory coupled to the processing unit, and

a mass storage device coupled to the processing unit; and

a peripheral system housed within the console and shared between the plurality of computer modules,

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, wherein each of the computer modules and the peripheral system receives DC power from the power supply in the console, and wherein any two of the computer modules can replace each other in operation.

38. (Previously Presented) The computer system of claim 37 wherein the peripheral system comprises at least one device selected from the group consisting of an input device, a second input device, a first monitor, a second monitor, a CDROM, and an external communication port.

39. (Previously Presented) The computer system of claim 37 wherein an Ethernet controller is utilized for communication between the computer modules to access the shared peripheral system.

40. (Previously Presented) The peripheral system of claim 38 wherein the peripheral device is used to control any one of the computer modules of claim 37.

41-61. (Canceled)

62. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, a second coupling site, and a serial communication controller, each coupling site comprising a connector, the console comprising an enclosure capable of housing each coupling site; and

a plurality of computer modules mated with said console through the connector, each comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher for high speed serial communication with the other modules,

a network controller coupled to the processing unit, and

a mass storage device coupled to the processing unit,

wherein each of the computer units is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, wherein each of the computer modules communicates with each other and to an external network through the serial communication controller in the console, and wherein any two computer modules can replace each other in operation.

63. (Previously Presented) The computer system of claim 62 wherein the console further comprises a power supply that supplies power to the serial communication controller.

64. (Previously Presented) The computer system of claim 62 wherein the serial communication controller supports Giga-bit Ethernet network communication.

65. (Previously Presented) The computer system of claim 62 wherein the network controller in each of the computer modules supports Giga-bit Ethernet network communication.

66. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, a second coupling site, a serial communication controller, and a power supply, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and the power supply;
and

a plurality of computer modules, each coupled to the connector and comprising,
a processing unit configured to operate at a frequency of 400 MHz or higher,
a network controller configured to support Giga-bit Ethernet network communication with the other modules,
a main memory coupled to the processing unit, and
a mass storage device coupled to the processing unit,
wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, wherein each of the computer modules receives DC power from the power supply in the console, and wherein any two of the computer modules can replace each other in operation.

67. (Previously Presented) A computer system comprising:
a shared peripheral console comprising a first coupling site, a second coupling site, a serial communication controller and a power supply, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site; and

a plurality of computer modules, each coupled to ~~[[a]]~~ the connector and comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher,

an Ethernet network controller configured to allow high speed serial communication with the other modules,

a main memory coupled to the processing unit, a mass storage device coupled to the processing unit, and

stored graphic control software code for performing a control function,

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, wherein each of the computer modules receives DC power from the power supply in the console, and wherein any two of the computer modules can replace each other in operation.

68. (Previously Presented) A computer system comprising:

a console comprising a first coupling site, a second coupling site, a serial communication controller, and a power supply, each coupling site comprising a connector, the console comprising an enclosure capable of housing each coupling site and the power supply;

a plurality of computer modules, each coupled to the connector and comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher,

a network controller coupled to the processor to allow high speed serial communication with the other modules,

a main memory coupled to the processing unit,

a mass storage device coupled to the processing unit, and

keyboard and mouse input data processing software; and

module keyboard and mouse switch software switching an external keyboard, and mouse to couple to each of the computer modules,

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, wherein each of the computer modules receive DC power from the power supply in the console, and wherein any two of the computer modules can replace each other in operation.

69-74. (Canceled)

75. (Previously Presented) The computer system of claim 37 wherein each computer module comprises a second enclosure.

76. (Previously Presented) The computer system of claim 75 wherein the console further comprises a serial communication controller adapted to transfer data between any two of the computer modules.

77. (Previously Presented) The computer system of claim 76 wherein direct communication between any two of the computer modules adapted within the console is primarily through serial communication.

78-83. (Canceled)

84. (Previously Presented) The computer system of claim 52 wherein each computer module comprises a second enclosure.

85. (Previously Presented) The computer system of claim 84 wherein the console further comprises a serial communication controller adapted to transfer data between any two of the computer modules.

86. (Previously Presented) The computer system of claim 85 wherein direct communication between any two of the computer modules adapted within the console is primarily through serial communication.

87. (Previously Presented) The computer system of claim 62 wherein each computer module comprises a second enclosure.

88. (Previously Presented) The computer system of claim 87 wherein the serial communication controller supports Giga-bit Ethernet communication between computer modules and connects to an external network.

89. (Previously Presented) The computer system of claim 66 wherein each computer module comprises a second enclosure.

90. (Previously Presented) The computer system of claim 67 wherein the serial communication controller supports Giga-bit Ethernet communication between computer modules and connects to an external network.

91. (Previously Presented) The computer system of claim 67 wherein each computer module comprises a second enclosure.

92. (Previously Presented) The computer system of claim 68 wherein the serial communication controller supports Giga-bit Ethernet communication between computer modules and connects to an external network.

93. (Previously Presented) The computer system of claim 68 wherein each computer module comprises a second enclosure.

94. (Previously Presented) A computer system comprising:

a console comprising a first coupling site, a second coupling site, and a serial communication hub controller, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and said serial communication hub controller; and

a plurality of computer modules mated with said console, each coupled to the connector and comprising,

a processing unit,

a main memory coupled to the processing unit,

a hard disk drive coupled to the processing unit, and

a serial communication controller coupled to said serial communication hub controller serving as the primary high speed direct communication with the other computer modules within the console,

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system.

95. (Previously Presented) The computer system of claim 94 wherein the console further comprises video, keyboard and mouse switch circuits coupled to the serial communication hub controller.

96. (Previously Presented) A computer system for multi-processing purposes, the computer system comprising:

a console comprising a first coupling site and a second coupling site; each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site;

a plurality of computer modules mated with said console, each of the computer modules enclosed within a housing and coupled to the connector, each of the computer modules comprising a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the processing unit, and a mass storage device comprising a hard disk drive coupled to the processing unit;

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system, and wherein one of the plurality of computer modules is configured to provide protection against failure of another of the plurality of computer modules.

97. (Previously Presented) The computer system of claim 96 wherein the console further comprises a serial communication controller adapted to transfer data between any two of the computer modules.

98. (Previously Presented) The computer system of claim 97 wherein direct communication between any two of the computer modules adapted within the console is primarily through serial communication.

99. (Previously Presented) The computer system of claim 97 wherein the serial communication controller supports Giga-bit Ethernet communication between computer modules and connects to an external network.

100. (Previously Presented) The computer system of claim 96 wherein the console further comprises at least one of:

video, keyboard, and mouse switch software; and
video, keyboard and mouse switch circuits.

101-105. (Canceled)

106. (Previously Presented) A computer system for multi-processing purposes, the computer system comprising:

a console comprising a first coupling site and a second coupling site; each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site;

a plurality of computer modules mated with said console, each of the computer modules coupled to the connector, each of the computer modules comprising a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the processing unit, and a mass storage device coupled to the processing unit; and

a serial communication hub controller housed within the console and adapted to transfer data between any two of the computer modules,

wherein each of the computer modules is substantially similar in design to each other to provide independent processing of each of the computer modules in the computer system.

107. (Previously Presented) The computer system of claim 106 wherein the console further comprises a power supply that supplies power to the serial communication hub controller.

108. (Previously Presented) The computer system of claim 106 wherein the serial communication hub controller supports Ethernet network communication.

109. (Previously Presented) The computer system of claim 106 wherein the serial communication hub controller supports Giga-bit Ethernet network communication.

110. (Previously Presented) The computer system of claim 106 wherein each of the computer modules further comprises a network controller configured to support Giga-bit Ethernet network communication.

111. (Previously Presented) The computer system of claim 100 further comprising at least one of a special key on a keyboard and a special screen icon, the special key and the icon configured to allow the user to switch a screen display from one computer module to another computer module.

112. (Previously Presented) The computer system of claim 105 further comprising at least one of a special key on a keyboard and a special screen icon, the special key and the icon configured to allow the user to switch a screen display from one computer module to another computer module.

113. (Previously Presented) The computer system of claim 106 wherein the console further comprises at least one of:
video, keyboard, and mouse switch software; and
video, keyboard and mouse switch circuits coupled to the serial communication hub controller.

114. (Previously Presented) The computer system of claim 113 further comprising at least one of a special key on a keyboard and a special screen icon, the special key and the icon configured to allow the user to switch a screen display from one computer module to another computer module.

115. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, a second coupling site, an Ethernet communication controller, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and the Ethernet communication controller; and

a plurality of computer modules mated with said console, each coupled to one of the connectors in the console and comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher,

a network controller coupled to the Ethernet communication controller and configured to support communication with the other modules,

a main memory coupled to the processing unit, and

a mass storage device coupled to the processing unit,

wherein each of the computer modules provide independent processing in the computer system, and wherein one of the computer modules is configured to provide protection against failure of another of the plurality of computer modules.

116. (Previously Presented) The computer system of claim 115 wherein the Ethernet communication controller supports Giga-bit Ethernet communication between the computer modules and to an external network.

117. (Previously Presented) The computer system of claim 115 wherein the console further comprises a peripheral system shared between the plurality of computer modules, and wherein the peripheral system comprises at least one device selected from the group consisting of an input device, a second input device, a first monitor, a second monitor, a CDROM, and an external communication port.

118. (Previously Presented) The computer system of claim 115 wherein communication between the computer modules is through Ethernet communication.

119. (Previously Presented) The computer system of claim 115 wherein Ethernet communication between the computer modules passes through said connectors.

120. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, a second coupling site, a serial communication hub controller, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and the serial communication hub controller; and
a plurality of computer modules mated with said console, each coupled to one of the connectors of the console and comprising,
a processing unit configured to operate at a frequency of 400 MHz or higher,

a network controller configured to support communication with the other modules,
a main memory coupled to the processing unit, and
a graphics controller coupled to the processing unit,
wherein each of the computer modules provide independent processing in the computer system,
and wherein one of the computer modules is configured to provide protection against failure of another of the plurality of computer modules.

121. (Previously Presented) The computer system of claim 120 wherein the serial communication hub controller supports Giga-bit Ethernet communication between the computer modules and to an external network.

122. (Previously Presented) The computer system of claim 120 wherein the console further comprises a peripheral system shared between the plurality of computer modules and wherein the peripheral system comprises at least one device selected from the group consisting of an input device, a second input device, a first monitor, a second monitor, a CDROM, and an external communication port.

123. (Previously Presented) The computer system of claim 120 wherein communication between the computer modules is through serial communication.

124. (Previously Presented) The computer system of claim 120 wherein serial communication between the computer modules passes through said connectors.

125. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, a second coupling site, an Ethernet communication hub controller, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and the Ethernet communication hub controller; and

a plurality of computer modules mated with said console, each coupled to one of the connectors of the console and comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher,

a network controller coupled to the Ethernet communication hub controller configured to support communication with the other modules,

a main memory coupled to the processing unit, and

a mass storage device coupled to the processing unit,

wherein each of the computer modules provide independent processing in the computer system, and wherein two of the computer modules can replace each other in operation.

126. (Previously Presented) The computer system of claim 125 wherein the Ethernet communication hub controller supports Giga-bit Ethernet communication between the computer modules and to an external network.

127. (Previously Presented) The computer system of claim 125 wherein the console further comprises a peripheral system shared between the plurality of computer modules, and wherein the peripheral system comprises at least one device selected from the group consisting of an input device, a second input device, a first monitor, a second monitor, a CDROM, and an external communication port.

128. (Previously Presented) The computer system of claim 125 wherein communication between the computer modules is through Ethernet communication.

129. (Previously Presented) The computer system of claim 125 wherein Ethernet communication between the computer modules passes through said connectors.

130. (Previously Presented) A computer system comprising:

a console comprising a first coupling site, a second coupling site, a serial communication controller, each coupling site comprising a connector, the console being an enclosure that is capable of housing each coupling site and the serial communication controller; and

a plurality of computer modules mated with said console, each coupled to one of the connectors of the console and comprising,

a processing unit configured to operate at a frequency of 400 MHz or higher,

a network controller configured to support communication with the other modules,

a main memory coupled to the processing unit, and

a graphics controller coupled to the processing unit,

wherein each of the computer modules provide independent processing in the computer system, and wherein two of the computer modules can replace each other in operation.

131. (Previously Presented) The computer system of claim 130 wherein the serial communication controller supports Giga-bit Ethernet communication between the computer modules and to an external network.

132. (Previously Presented) The computer system of claim 130 wherein the console further comprises a peripheral system shared between the plurality of computer modules, and wherein the peripheral system comprises at least one device selected from the group consisting of an input device, a second input device, a first monitor, a second monitor, a CDROM, and an external communication port.

133. (Previously Presented) The computer system of claim 130 wherein communication between the computer modules is through serial communication.

134. (Previously Presented) The computer system of claim 130 wherein serial communication between computer modules passes through said connectors.

135. (Canceled)

136. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing each coupling site, an Ethernet hub controller, and a plurality of computer modules, each coupled to one of the coupling sites through the connector and the slot;
each computer module comprising a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the processing unit, and
an Ethernet controller coupled to the Ethernet hub controller through the connector of the coupling site for communication between the computer modules;
wherein each of the computer modules operates fully independent of each other, and wherein any one of the computer modules can replace another computer module in operation.

137. (Previously Presented) The computer system of claim 136 wherein the console further houses a power supply that supplies DC power to the Ethernet hub controller and the computer modules.

138. (Previously Presented) The computer system of claim 136 wherein the computer module further comprises of an enclosure and a hard disk drive wherein the enclosure houses the hard disk drive.

139. (Previously Presented) The computer system of claim 136 wherein the Ethernet controller of each computer module and the Ethernet hub controller provide Gbit Ethernet communication.

140. (Previously Presented) The computer system of claim 136 wherein the console further houses a keyboard/mouse multi-port switch for switching between keyboard/mouse connection of the computer modules.

141. (Previously Presented) A computer system comprising:
a console comprising a power supply, a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing each coupling site, a serial communication hub controller powered by the power supply, and a plurality of computer modules;

each computer module coupled to one of the coupling sites through the connector and the slot;

each computer module comprising a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the processing unit, and a serial communication controller coupled to the serial communication hub controller through the connector of the coupling site for communication between the computer modules;

wherein each of the computer modules operates fully independent of each other, and wherein one of the computer modules can provide protection against failure of any one of the other computer modules.

142. (Previously Presented) The computer system of claim 141 wherein the console further houses a video switch coupled to the graphics controller of each of the computer modules.

143. (Previously Presented) The computer system of claim 141 wherein the computer module further comprises of an enclosure and a hard disk drive wherein the enclosure houses the hard disk drive.

144. (Previously Presented) The computer system of claim 141 wherein the serial communication hub controller comprises an Ethernet hub controller adapted to transfer data between any two of the computer modules and to an external network.

145. (Previously Presented) The computer system of claim 141 wherein each computer module further comprises of keyboard/mouse switching software to connect to an external keyboard/mouse through network.

146. (Previously Presented) A computer system comprising:
a console comprising a video switch, a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing the video switch, each coupling site, an Ethernet controller coupled to an external network, and a plurality of computer modules, each coupled to one of the coupling sites through the connector and the slot;

each computer module comprising a processing unit, a main memory coupled to the processing unit, a graphics controller coupled to the video switch, and a network controller coupled to the Ethernet controller through the connector of the coupling site for communication between the computer modules;

wherein each of the computer modules operates fully independent of each other.

147. (Previously Presented) The computer system of claim 146 wherein the console further houses a power supply that supplies DC power to the Ethernet controller.

148. (Previously Presented) The computer system of claim 146 wherein the computer module further comprises of an enclosure and a hard disk drive wherein the enclosure houses the hard disk drive.

149. (Previously Presented) The computer system of claim 146 wherein the network controller of each computer module and the Ethernet controller provide Gbit Ethernet communication.

150. (Previously Presented) The computer system of claim 146 wherein the console further houses a keyboard/mouse multi-port switch for switching between keyboard/mouse connection of the computer modules.

151. (Previously Presented) A computer system comprising:
a console comprising a power supply, a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing each coupling site, an Ethernet hub controller powered by the power supply, and a plurality of computer modules; each of the computer module coupled to one of the coupling sites through the connector and the slot;

each computer module comprising a processing unit, a main memory coupled to the processing unit, a SCSI hard disk drive, and an Ethernet controller coupled to the Ethernet hub controller through the connector of the coupling site for communication between the computer modules;

wherein each of the computer modules operates fully independent of each other, and wherein any one of the computer modules can replace another computer module in operation.

152. (Previously Presented) The computer system of claim 151 wherein the console further comprises a video switch coupled to the computer module.

153. (Previously Presented) The computer system of claim 151 wherein the SCSI hard disk drive is removable while the computer module is in operation.

154. (Previously Presented) The computer system of claim 151 wherein the Ethernet controller of each computer module and the Ethernet hub controller provide Gbit Ethernet communication.

155. (Previously Presented) The computer system of claim 151 wherein the console further comprises of a keyboard/mouse switch coupled to the computer module.

156. (Previously Presented) A computer system comprising:
a console comprising a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot; the console being an enclosure housing each coupling site, an Ethernet hub controller, and a plurality of computer modules, each coupled to the coupling site through the connector and the slot;

each computer module comprising a processing unit, a main memory coupled to the processing unit, a graphics controller, and an Ethernet controller coupled to the Ethernet hub controller through the connector of the coupling site for communication between the computer modules; and

a SCSI hard disk drive coupled to the computer module;

wherein each of the computer modules is substantially similar in design to each other, and wherein one of the computer modules can provide protection against failure of another one of the computer modules.

157. (Previously Presented) The computer system of claim 156 wherein the console further houses a power supply that supplies DC power to the Ethernet hub controller and the computer modules.

158. (Previously Presented) The computer system of claim 156 wherein the hard disk drive is removable.

159. (Previously Presented) The computer system of claim 156 wherein the Ethernet controller of each computer module and the Ethernet hub controller provide Gbit Ethernet communication.

160. (Previously Presented) The computer system of claim 156 wherein the console further comprises of a keyboard/mouse switch and a video switch coupled to the computer module.

161. (Previously Presented) A computer system comprising:
a console comprising an Ethernet communication controller coupled to an external network, a keyboard/mouse multi-port switch, a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing the Ethernet communication controller, each coupling site, and
a plurality of computer modules, each coupled to one of the coupling sites through the connector and the slot;
each computer module comprising an enclosure, a processing unit, a main memory coupled to the processing unit, and a network controller coupled to the Ethernet communication controller through the connector of the coupling site for communication between the computer modules;
wherein each of the computer modules operates fully independent of each other;
and wherein the keyboard/mouse multi-port switch switches between keyboard/mouse connection of the computer modules based on a command from a user.

162. (Previously Presented) The computer system of claim 161 wherein the console further houses a power supply that supplies DC power to the Ethernet communication controller and the computer modules.

163. (Previously Presented) The computer system of claim 161 wherein the network controller of each computer module and the Ethernet communication controller provide Gbit Ethernet communication.

164. (Previously Presented) The computer system of claim 161 wherein the command from the user is in the form of either a key on the keyboard or an icon on the screen that the mouse can click on.

165. (Previously Presented) A computer system comprising:
a console comprising a power supply, a first coupling site, and a second coupling site, each coupling site comprising a connector and a slot, the console being an enclosure housing the power supply, each coupling site, an Ethernet controller coupled to an external network and powered by the power supply, and a plurality of computer modules, each coupled to one of the coupling sites through the connector and the slot;
each computer module comprising a processing unit, a main memory coupled to the processing unit, and a network controller coupled to the Ethernet controller through the connector of the coupling site for communication between the computer modules;
wherein each of the computer modules operates fully independent of each other.

166. (Previously Presented) The computer system of claim 161 wherein the computer module further comprises of an enclosure and a hard disk drive wherein the enclosure houses the hard disk drive.